



Application No.: 09/049304  
Docket No.: BB1037-F

Page 2

The listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

Claim 1-3 (cancelled)

Claim 4 (previously presented) An isolated nucleic acid fragment comprising a nucleic acid sequence that is capable of hybridizing to the sequence set forth in SEQ ID NO:120 under stringent conditions and is useful in increasing lysine content in a plant cell.

Claim 5 (previously presented) The nucleic acid fragment of Claim 4, wherein the nucleic acid sequence encodes a polypeptide as set forth in SEQ ID NO:122.

Claim 6 (currently amended) A chimeric gene comprising the isolated nucleic acid fragment of Claim 4 operably linked to suitable seed-specific regulatory sequences wherein a plant transformed with said chimeric gene has seeds with increase increased lysine content compared to seeds obtained from untransformed plants.

Claim 7 (currently amended) The chimeric gene according to Claim 6 wherein the isolated nucleic acid fragment comprises all or a part of the nucleic acid sequence set forth in SEQ ID NO:120 and further wherein said fragment is sufficient to increase lysine content in a plant cell .

Claim 8 (cancelled)

Claim 9 (currently amended) A plant cell transformed with the chimeric gene of Claim 6 or 7 wherein said transformed plant cell has ~~reduced lysine ketoglutarate reductase/saccharopine dehydrogenase activity~~ increased lysine content.

Claim 10 (cancelled)

Claim 11 (previously presented) A plant seed transformed with the chimeric gene of claim 6 or 7 wherein said transformed plant seed has an increased lysine content compared to seed obtained from an untransformed plant.

RECEIVED  
OCT 21 2003  
TECH CENTER 1600/2900

Claim 12 (original) The plant cell according to Claim 9 wherein said plant cell is selected from the group consisting of *Arabidopsis*, corn, soybean, rapeseed, wheat and rice.

Claim 13 (previously presented) The plant seed according to Claim 11 wherein said plant cell is selected from the group of plants consisting of *Arabidopsis*, corn, soybean, rapeseed, wheat and rice.

Claim 14 (previously presented) A method for increasing lysine content in a plant seed which comprises:

- (a) transforming plant cells with the chimeric gene of claim 6 or 7;
- (b) regenerating fertile mature plants from the transformed plant cells obtained from step (a) under conditions suitable to obtain seeds;
- (c) screening progeny seed of step (b) for increased lysine content; and
- (d) selecting those lines whose seeds have increased lysine content.

Claim 15 (previously presented) Seed obtained from the plant of Claim 14.

Claims 16-20 (cancelled)

Claims 21-26 (cancelled)